

Causes for Gasoline & Diesel Price Increases in California

OCTOBER MONTHLY UPDATE

California Energy Commission

October 1, 2003



CAUSES FOR GASOLINE AND DIESEL PRICE INCREASES IN CALIFORNIA

Summary

On March 13, 2003, Governor Davis asked the California Energy Commission (Energy Commission) to investigate the causes for the rapid rise in gasoline and diesel prices in February and March. Since submitting its March 28 report, the Energy Commission has provided monthly updates at the request of the Governor. This report presents the Energy Commission's October 2003 update.

Gasoline prices declined steadily in September from the high levels reached in August. As of September 29, the average retail regular gasoline price was \$1.91 per gallon, down from a peak of \$2.10 on August 25.

With the return to production of several West Coast refineries that had experienced unplanned outages during July and August, as well as the repair of a pipeline in Arizona delivering gasoline from Texas to the Phoenix area, supplies of gasoline available for California increased steadily during September. This enabled refinery stocks of gasoline in California to be built up substantially compared to the extremely low levels of mid-August.

As a result of these factors, wholesale gasoline prices declined sharply during September. Wholesale regular gasoline prices on the Los Angeles spot market peaked at \$1.67 per gallon on August 20. Spot prices then fell almost 50 percent through late August and into September, reaching a low of \$0.85 per gallon on September 19, before rising to \$0.91 on September 29. Gradually at first, but then with increasing momentum, lower wholesale prices pulled retail gasoline prices down as well.

Diesel prices also declined in September as inventories began to rebuild from the very low levels reached in July. Average retail diesel prices in California decreased from \$1.75 per gallon on August 25 to \$1.60 on September 29.

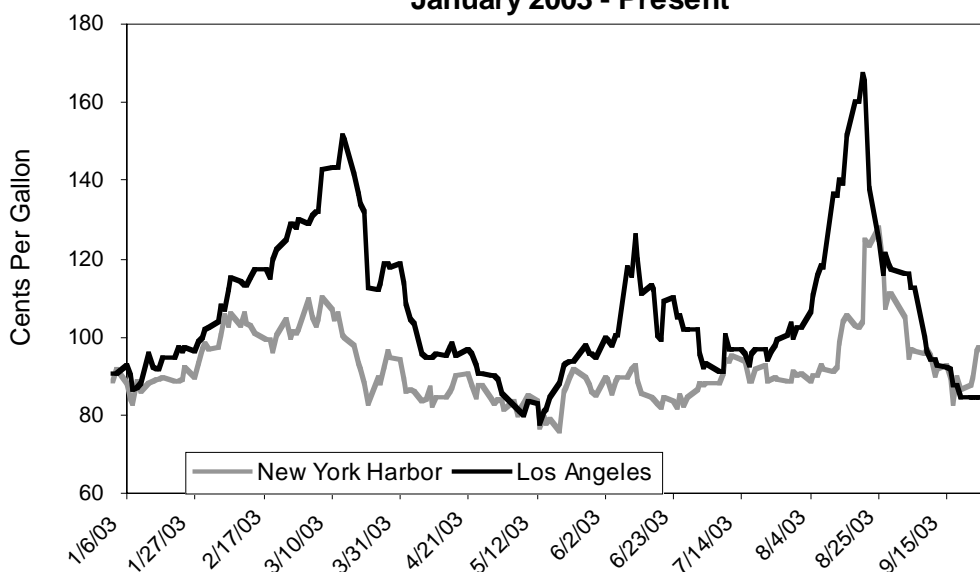
World crude oil prices declined during most of September, as U.S. crude oil inventories slowly began to rebuild and ongoing problems in the Iraqi, Nigerian and Venezuelan oil sectors eased somewhat. As of September 22, Alaska North Slope (ANS) crude oil prices had fallen to \$25.85 per barrel. This declining trend was reversed by an unexpected cut in oil production quotas by the Organization of Petroleum Exporting Countries (OPEC) on September 24. As of September 29, the price of Alaska crude oil delivered to California rebounded to \$27.15 per barrel, compared to \$30.21 on August 29.

Recent California Gasoline Prices

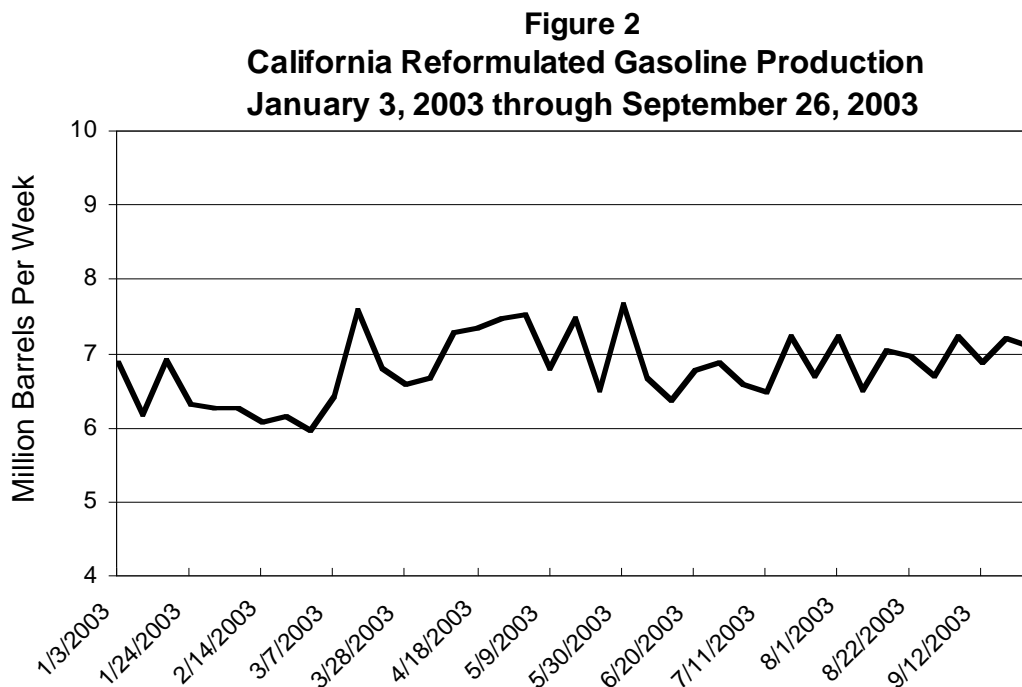
Gasoline prices in California have fallen substantially in September compared to August, although retail price decreases have lagged behind wholesale price declines. Several refineries in the state that had experienced unplanned outages during July and August have returned to full production. Meanwhile, repairs were successfully completed on the Kinder Morgan pipeline that delivers gasoline to Phoenix from Texas, reducing the need for diverting gasoline supplies from Southern California. Following these refinery and pipeline repairs, inventories of gasoline and blending components in California and on the West Coast steadily increased during September.

As shown in Figure 1, wholesale gasoline prices in California spiked to record levels during August 2003 because the combination of refinery and pipeline problems caused the loss or diversion of about 12 percent of daily statewide gasoline production¹. As a result of these difficulties, inventories of California reformulated gasoline and blending components declined sharply in August. As facilities came back on line, inventories began to rebuild and prices fell. Regular-grade wholesale gasoline prices on the Los Angeles spot market, which had spiked to \$1.67 per gallon on August 20, plummeted to \$1.16 by August 26. Wholesale gasoline prices resumed their sharp decline in September, falling another 31 cents to \$0.85 per gallon by September 19, before rebounding to \$0.91 on September 29.

Figure 1
Wholesale Gasoline Prices - Los Angeles vs. New York
January 2003 - Present



During the month of September, California reformulated gasoline production gradually increased to a weekly average of 7.1 million barrels compared to average production during June through August of 6.8 million barrels per week (see Figure 2). In addition, the reduction in diversions of supply into Phoenix, newly-arrived cargoes of imported product and reduced post-Labor Day gasoline demand have also contributed to increasing California gasoline inventories².



California refinery inventories of combined reformulated gasoline and blendstocks in September are gradually recovering from the precipitous decline of nearly 3 million barrels between July 25 and August 15 (see Figure 3). As of September 26, stocks had risen to 10.8 million barrels, an increase of about 600,000 barrels from August 29. Similarly, total gasoline and blendstock inventories for refineries and terminals in the Petroleum Administration for Defense District 5 (PADD 5) region rose to 28.9 million barrels as of September 26, an increase of 1.4 million barrels since August 29.

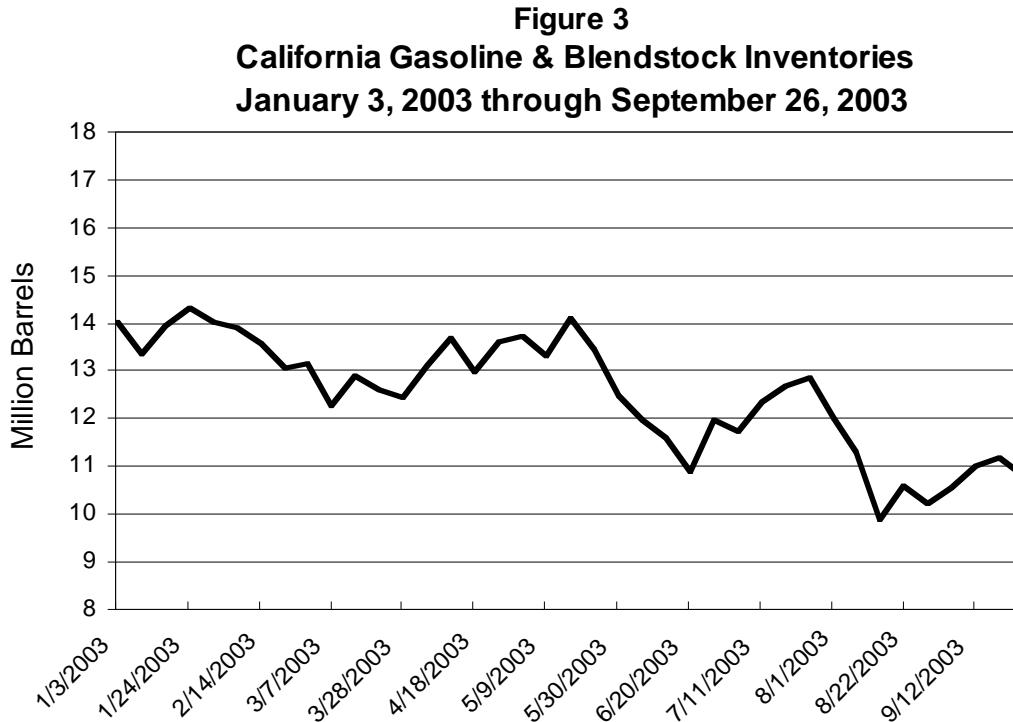
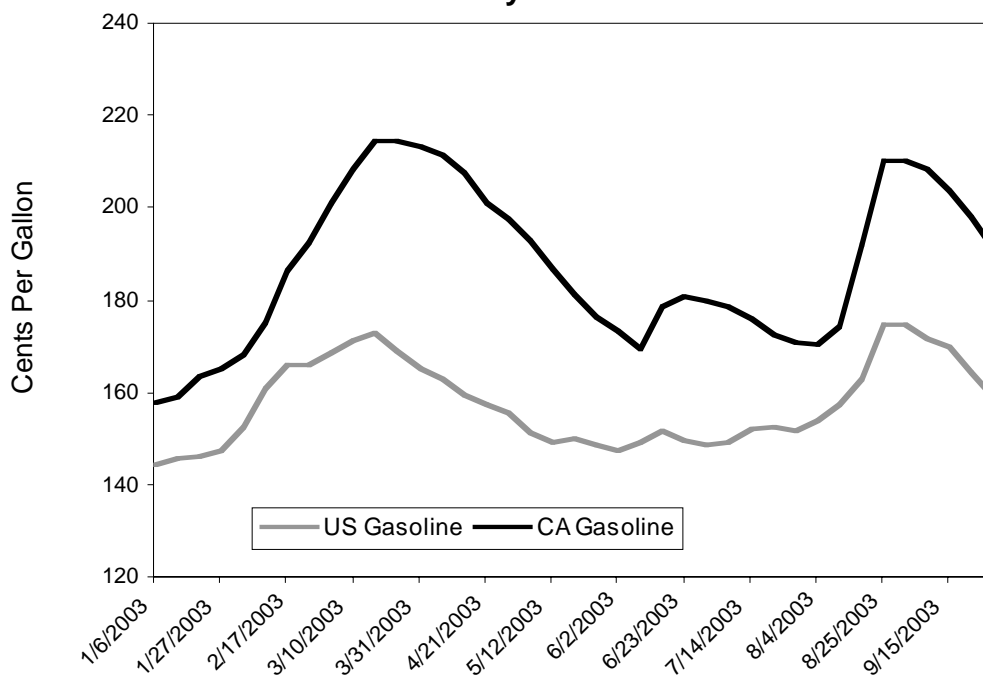


Figure 4 compares regular-grade retail gasoline prices in California with U.S. average gasoline prices through September 29, 2003. On August 25, retail gasoline prices in California rose to \$2.10 per gallon, approaching the record of \$2.15 set in March 2003. Since then prices gradually declined to \$1.91 per gallon by September 29.

As Figure 4 also shows, this tendency for retail prices to rise faster than they fall, even as spot prices rapidly decline, is not unique to California. Average U.S. retail gasoline prices, which were affected by refinery outages caused by the August electricity blackout in the Northeast, exhibited the same pattern of slow decline as did California retail prices during September.

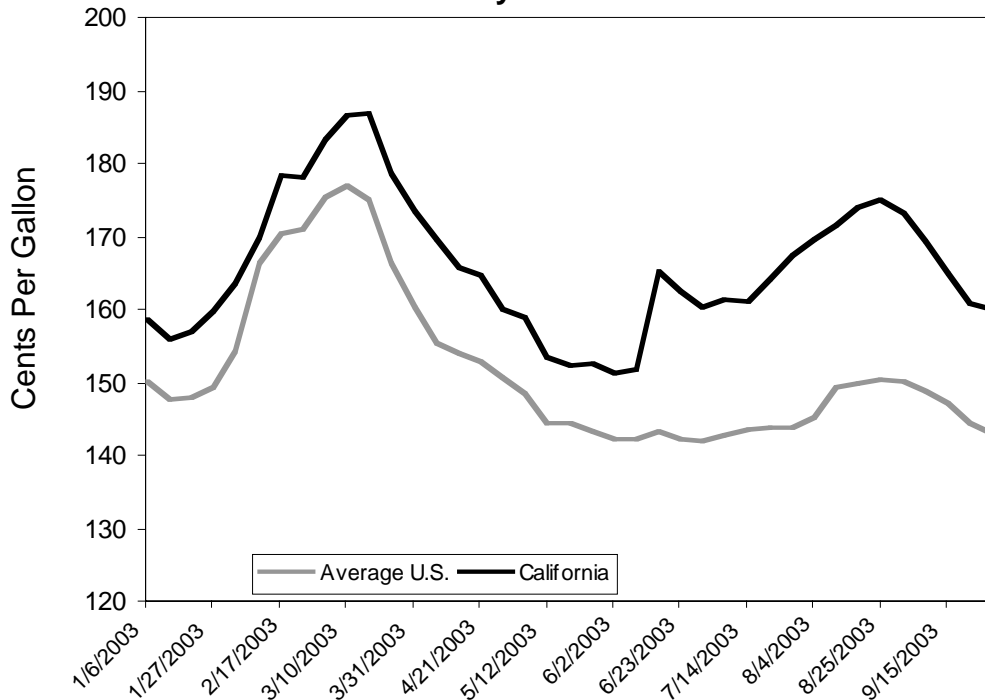
Figure 4
Retail Gasoline Prices - California vs. U.S. All Formulations
January 2003 - Present



Recent California Diesel Fuel Prices

Figure 5 compares retail diesel prices in California with the U.S. average price through September 29, 2003. California retail diesel prices that peaked at \$1.75 per gallon on August 25 have since declined steadily, falling to \$1.60 as of September 29.

Figure 5
Retail Diesel Prices - California vs. U.S.
January 2003 - Present



Inventories of low-sulfur diesel in the PADD 5 region are continuing to rebuild after reaching their lowest levels in almost five years during July. PADD 5 low-sulfur diesel stocks had climbed above 10 million barrels by September 12, their highest levels since January, before falling slightly to 9.7 million barrels as of September 26. Similarly, during August, California refinery stocks of California Air Resources Board (CARB) diesel started to rebound after falling to very low levels in July. Some of this increase in CARB diesel inventories was lost during late September, but California refinery stocks of other low-sulfur diesel also increased during September. Wholesale low-sulfur diesel prices in the Los Angeles spot market have steadily dropped since peaking at \$1.00 per gallon on August 13. With crude oil prices declining, refineries back in operation and diesel stocks rebuilding, spot diesel prices fell to \$0.77 per gallon on September 29.

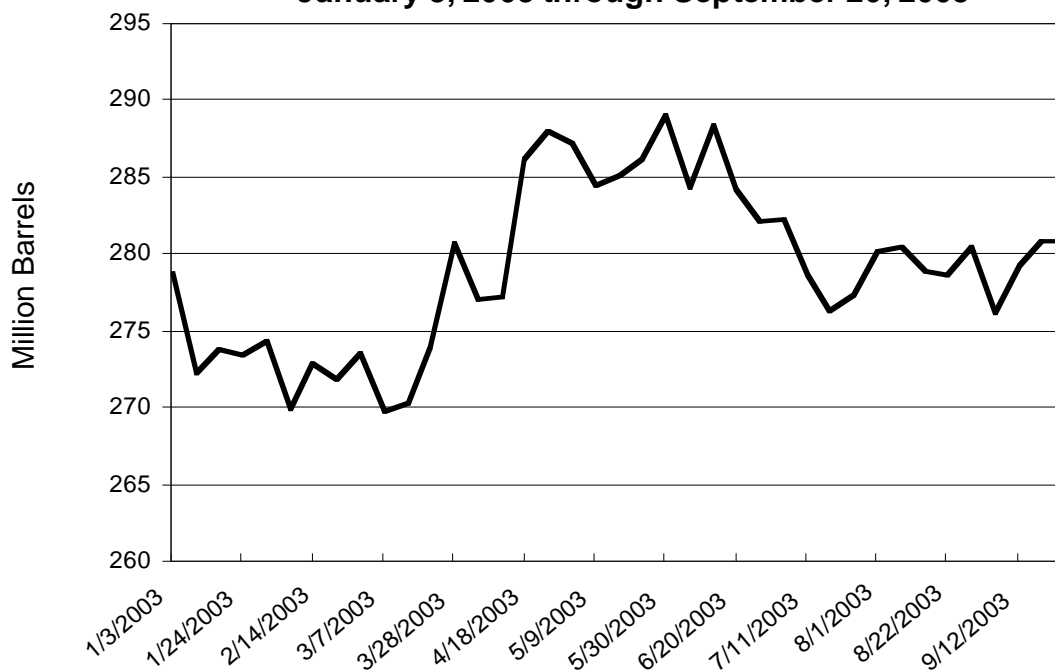
Crude Oil Prices

World crude oil prices in September started to weaken from the relatively high levels that have prevailed since late May. Despite ongoing difficulties from the sabotage of pipelines, Iraqi oil exports are steadily growing. Likewise, continuing unrest in Nigeria has not substantially reduced oil exports from that country.

during September. Production and exports from Venezuela have also steadily improved in the aftermath of the oil worker strikes earlier this year. However, on September 24 the Organization of Petroleum Exporting Countries (OPEC) issued an unexpected announcement that member nations' crude oil production quotas would be cut by a total of 900,000 barrels per day effective November 1. This action caught petroleum markets off guard and immediately reversed the slide in crude oil and spot market fuel prices.

U.S. crude oil inventories are still struggling to recover from the 27-year low of approximately 270 million barrels reached in March of 2003 (see Figure 6). After increasing to nearly 290 million barrels during June, inventories have vacillated within a range of 275-280 million barrels from July through most of September. As of September 26, inventories had reached 281 million barrels, 2 percent above the level of crude oil inventories in the U.S. one year ago.

Figure 6
U.S. Crude Oil Inventories
January 3, 2003 through September 26, 2003



Crude oil prices have been an important contributing factor in the high gasoline and diesel prices experienced during 2003. But, with U.S. crude oil inventories slowly building and ongoing uncertainties in world markets gradually easing, Alaska North Slope (ANS) crude oil that traded between \$28-31 per barrel through July and August had fallen to \$25.85 by September 22. OPEC's announced production cut reversed this price trend. As of September 29, ANS prices had risen to \$27.15 per barrel.

California Fuel Costs and Apparent Margins

Tables 1 and 2 break out the price and cost components of a typical gallon of gasoline and diesel, respectively, averaged for September 2002, September 2003, and all years from 1997 to the present.³ After netting out all taxes and crude oil costs, the bottom two rows of both tables display the implied refining and distribution margins.⁴ "Refiner Costs and Profits" include all refiner production costs other than the cost of crude oil.⁵ "Distribution Costs, Marketing Costs, and Profits" include costs associated with the distribution from terminals to stations and retailing of gasoline, including transportation and profits.⁶

Table 1
California Gasoline Cost Analysis (\$/gallon)

| | Branded Gasoline | | | Unbranded Gasoline | | |
|---|------------------|-------------|----------------|--------------------|-------------|----------------|
| | Sep 2003 | Sep 2002 | 1997 - Present | Sep 2003 | Sep 2002 | 1997 - Present |
| Retail Prices | 2.05 | 1.58 | 1.50 | 2.05 | 1.58 | 1.50 |
| Federal Excise Tax | 0.16 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| State Excise Tax | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| State and Local Sales Tax | 0.15 | 0.12 | 0.11 | 0.15 | 0.12 | 0.11 |
| Crude Oil Cost | 0.65 | 0.68 | 0.52 | 0.65 | 0.68 | 0.52 |
| Refiner Costs and Profits | 0.64 | 0.42 | 0.40 | 0.47 | 0.24 | 0.35 |
| Distribution Costs, Marketing Costs, and Profits | 0.27 | 0.00 | 0.11 | 0.42 | 0.18 | 0.16 |

Table 2
California Diesel Cost Analysis

| | Branded Diesel | | | Unbranded Diesel | | |
|---|----------------|-------------|----------------|------------------|-------------|----------------|
| | Sep 2003 | Sep 2002 | 1997 - Present | Sep 2003 | Sep 2002 | 1997 - Present |
| Retail Prices | 1.66 | 1.60 | 1.46 | 1.66 | 1.60 | 1.46 |
| Federal Excise Tax | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| State Excise Tax | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| State and Local Sales Tax | 0.11 | 0.11 | 0.09 | 0.11 | 0.11 | 0.09 |
| Crude Oil Cost | 0.65 | 0.68 | 0.52 | 0.65 | 0.68 | 0.52 |
| Refinery Costs and Profits | 0.25 | 0.26 | 0.26 | 0.24 | 0.24 | 0.26 |
| Distribution Costs, Marketing Costs, and Profits | 0.23 | 0.13 | 0.17 | 0.24 | 0.15 | 0.17 |

Petroleum Industry Information - Response to Information Requests

In our March 28 report to the Governor, the Energy Commission identified inadequacies in the scope of data currently collected from the industry and discussed the need to broaden our existing data-collection efforts. A more detailed and frequent level of data collection will improve the Energy Commission's ability to assess and respond to petroleum market issues.

To address the need for better data, the Energy Commission adopted an Order Instituting Rulemaking (Order No. 03-0219-08; Docket No. 03-SB1962-1) in February 2003. During the rulemaking process, Energy Commission staff will consult with petroleum industry representatives to develop new weekly, monthly and annual reporting requirements. These discussions will also include dealer tank wagon prices. The proposed regulations will be subject to public review and comment. We expect the rulemaking to be complete by early 2004.

However, the Energy Commission remains concerned about the potential for supply problems during the remainder of 2003 because two different and non-fungible formulations of California gasoline are in the market place. Thus, as an interim measure, the Energy Commission and industry have been working cooperatively to develop data-reporting requirements that will be in effect until the formal rulemaking is complete. The Energy Commission staff has developed interim weekly reporting forms and mailed them to industry, which has begun reporting the newly-required information.

Assembly Bill 1340 (Kehoe) Petroleum: Information Reports has been enrolled and is awaiting signature. This bill restates existing Energy Commission authority under our PIIRA statutes. The bill expressly lists weekly reporting requirements that include, among other things, the regional average of invoiced retailer buying price. The bill further states that this is not intended to preclude or augment the current existing authority of the Energy Commission to collect additional data.

¹ Unless otherwise stated, the U.S. Energy Information Administration (EIA) is the source of all gasoline and diesel price data used in this report.

² Production and inventory data for California used in this report are from the Energy Commission Petroleum Industry Information Reporting Act (PIIRA) data. Data for the U.S. and Petroleum Administration for Defense District 5 (PADD 5) region are from the U.S. Energy Information Administration. PADD 5 consists of California, Arizona, Nevada, Oregon, Washington, Alaska and Hawaii.

³ The following data sources were used in preparing the tables 1 and 2; diesel and gasoline branded and unbranded rack prices are provided by OPIS, all retail prices are provided by EIA, and ANS crude oil prices are provided by the Wall Street Journal. Data for the current month include prices available at the time of preparation. Current calculations differ from prior reports by including both ethanol- and MTBE-based wholesale gasoline prices. The federal ethanol tax credit has been included in branded margin calculations. The majority of branded retailers are

now selling ethanol-based gasoline, while most unbranded retailers are still selling MTBE-based gasoline.

⁴ Most branded retail gasoline stations are operated by franchise dealers who must purchase their gasoline from a major branded refiner at the dealer tank wagon (DTW) price. DTW prices are determined by the branded refiners and include all delivery costs. Because the "Distribution and Marketing Costs" in the table below are derived from terminal rack prices and not DTW prices, an actual dealer margin, inclusive of costs and profits, cannot be inferred. Since the Energy Commission does not collect DTW prices, we cannot confirm the extent to which DTW prices differ from OPIS branded rack prices.

⁵ "Refiner Costs and Profits" includes all non-crude oil costs associated with refining and terminal operation, crude oil processing, oxygenate additives, product shipment and storage, oil spill fees, depreciation, purchases of gasoline to cover refinery shortages, brand advertising, and profits. The component is calculated as the difference between the Oil Price Information Service (OPIS) average rack price of gasoline and crude oil cost.

⁶ "Distribution Costs, Marketing Costs, and Profits" include: franchise fees, and/or rents, wages, utilities, supplies, equipment maintenance, environmental fees, licenses, permitting fees, credit card fees, insurance, depreciation, advertising, transportation and profits.